

Abstract of the Invention

[0066] The present invention is directed to a contact lens design and methods of manufacturing, fitting and using such lenses. As an example, the contact lens may be designed to be used in a corneal refractive therapy program. The contact lens according to the invention overcomes the deficiencies of the prior art, and provides a design which allows proper fitting of a patient, whether for corrective contact lenses or for use in a corneal refractive therapy program. The ability to properly fit a patient will alleviate, at least to a great degree, corneal abrasions from poorly distributed bearing, corneal warpage from decentered lenses, edema from tight fitting lenses and discomfort from excessive lens edge standoff. The simplified design allows a novice or relatively unskilled fitter to visualize the relationship between the contact lens and cornea of a patient's eye. The design and corresponding relationship to the patient's cornea allows selection of original trial lenses and any subsequent modifications to be easily designed or corrected. The lens design also provides improved ability of a fitter to consult with a lens designer to discuss clearly the lens cornea relationship for determining of the lens design. Due to the rational design of the lenses according to the present invention, a minimal number of lens parameter increments can be identified to cover the range of common corneas. It is therefore possible to provide pre-formed lens buttons or blanks which are easily formed into a final design, thereby simplifying and speeding up the treatment process. Further, any adjustment of the lens design which may be required based upon trial fitting or the like, is easily envisioned and implemented by the fitter.